

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) Method for illuminating an object with light from a laser light source comprising varying the phase angle of a light field with a modulator in such a way that interference phenomena do not occur in an optical beam path, or occur only to an undetectable extent, within a predetermined time interval, wherein the method is used with a microscope.
2. (previously presented) Method according to Claim 1, wherein an EOM (electro-optical modulator) is employed as the modulator.
3. (previously presented) Method according to Claim 2, wherein the EOM is arranged directly downstream of the laser light source.
4. (currently amended) Method ~~according to Claim 1, for illuminating an object with light from a laser light source comprising varying the phase angle of a light field with a modulator in such a way that interference phenomena do not occur in an optical beam path, or occur only to an undetectable extent, within a predetermined time interval,~~ wherein a mirror, a lens or a beam splitter is used as the modulator.
5. (previously presented) Method according to Claim 4, wherein the modulator is mounted in such a way that it also vibrates or oscillates as a result of vibrations or oscillations of an optical structure or of a casing.
6. (previously presented) Method according to Claim 4, wherein the modulator is moved using a control element.
7. (previously presented) Method according to Claim 6, wherein the control element is a piezo element.

8. (currently amended) Method ~~according to Claim 1, for illuminating an object with light from a laser light source comprising varying the phase angle of a light field with a modulator in such a way that interference phenomena do not occur in an optical beam path, or occur only to an undetectable extent, within a predetermined time interval,~~ wherein the modulator influences the laser light source.

9. (previously presented) Method according to Claim 8, wherein the modulator switches the laser light source on and off.

10. (previously presented) Method according to Claim 8, wherein the modulator influences the pump current of the laser light source.

11. (previously presented) Method according to Claim 8, wherein the modulator influences an intensity of the light.

12. (previously presented) Method according to Claim 8, wherein the modulator influences a laser resonator or an optical medium of the light.

13. (previously presented) Method according to Claim 12, wherein the modulator is a piezo element which at least one of moves and deforms at least one component of the laser resonator or the optical medium.

14. (previously presented) Method according to Claim 1, wherein a noise signal, a periodic signal or a stochastic signal is applied to the modulator.

15. (previously presented) Method according to Claim 14, wherein a noise generator is used to produce the noise signal.

16. (currently amended) Method ~~according to Claim 1, for illuminating an object with light from a laser light source comprising varying the phase angle of a light field with a modulator in such a way that interference phenomena do not occur in an optical beam path, or occur only to an undetectable extent, within a predetermined time interval,~~ wherein the method is used in a confocal scanning microscope.

17. (previously presented) Method according to Claim 16, wherein the predetermined time interval is shorter than a pixel clock of the confocal scanning microscope.

18. (previously presented) Method according to Claim 16, wherein the modulator is adapted to modulate in synchronization with a scanning process of the confocal scanning microscope.

19. (currently amended) Method ~~according to Claim 1, for illuminating an object with light from a laser light source comprising varying the phase angle of a light field with a modulator in such a way that interference phenomena do not occur in an optical beam path, or occur only to an undetectable extent, within a predetermined time interval,~~ wherein a wavelength of the light is changed by the modulator due to modulation, and wherein the change is taken into account by a control unit of an AOTF (acousto-optical tunable filter) or AOBS (acousto-optical beam splitter) which injects the light.

20. (currently amended) Method ~~according to Claim 1, for illuminating an object with light from a laser light source comprising varying the phase angle of a light field with a modulator in such a way that interference phenomena do not occur in an optical beam path, or occur only to an undetectable extent, within a predetermined time interval,~~ wherein power of the light is changed by the modulator due to modulation, and wherein the change is taken into account by a control unit of an AOTF (acousto-optical tunable filter) or AOBS (acousto-optical beam splitter) which injects the light.

21. (previously presented) Method according to Claim 5, wherein the optical structure is a portion of a confocal scanning microscope.

22. (previously presented) Method according to Claim 17, wherein the predetermined time interval is shorter than a time interval corresponding to half the pixel clock.

23. (previously presented) A confocal scanning microscope adapted to illuminate an object with light from a laser light source, comprising a modulator adapted to vary the phase angle of a light field of the light in such a way that interference phenomena does not occur in an optical beam path of the microscope, or occurs only to an insignificant extent, within a predetermined time interval.

24. (previously presented) The confocal scanning microscope of Claim 23, wherein the modulator is an EOM (electro-optical modulator).

25. (previously presented) The confocal scanning microscope of Claim 23, wherein a mirror, a lens or a beam splitter is used as the modulator.

26. (previously presented) The confocal scanning microscope of Claim 25, further comprising a piezo element adapted to move the modulator.

27. (previously presented) The confocal scanning microscope of Claim 23, further comprising a piezo element adapted to at least one of move and deform at least one component of a laser resonator and an optical medium.

28. (previously presented) The confocal scanning microscope of Claim 23, further comprising an AOTF (acousto-optical tunable filter) or AOBS (acousto-optical beam splitter) adapted to inject the light into an optical structure of the microscope; wherein at least one of the AOTF or the AOBS is adapted to take into account a change of at least one of power and a wavelength of the light resulting from modulation by the modulator.

29. (new) Method according to Claim 1, wherein the method is used with a confocal scanning microscope.